

Title: Fit the Plan to the Project Not the Project to the Plan

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Biography:

Tim Kurtz works for SAIC at NASA Glenn Research Center's Risk Management Office (RMO). RMO performs Safety and Mission Assurance functions for NASA micro gravity-experiments. Tim provides SQA and risk management support and training for the micro-gravity projects. He is currently researching QA and testing practices for web-based application development to develop a guidebook and training for NASA. Prior to working for SAIC, he managed software surveillance and the ISO 9000 certification program for the Defense Contract Management Command (DCMC) office at WPAFB in Dayton, Ohio. DCMC provides contract administration for DoD contracts, including software quality and engineering oversight.

Research hypothesis:

Can estimation, risks and resources be integrated to characterize a software development project to develop a tailored management plan?

Current Status:

Completed September 2001. Current task is technology transfer and market to NASA Centers.

Overview of the nature of the research:

This research effort entailed integrating COCOMO II cost estimation, NASA Glenn Research Center's Control Level philosophy and ISO 9000 processes into a tool that provides tailoring guidance for a project manager's planning effort. Other areas of research included incorporating the ability to determine the need for Independent Verification and Validation and integrating the tool with a risk-balancing tool to provide further customization. The decision-making logic is achieved through the use of a database that contains the questions, answers, criteria and results. Use of the database allows the tool to be tailored to an individual organization's needs and practices.

The major benefit of integrating COCOMO II and Control Level is the degree of project characterization these models provide. Incorporation of the IV&V criteria required that 17 factors be considered. All but three were already addressed by the COCOMO II or Control Level questions.

Value of the research to the profession:

The value of tailoring is the ability to place the necessary controls on a project to facilitate its success without overburdening it with activities and requirements that are not consistent with the project's risks. This research demonstrates an adaptable methodology for tailoring based on a project's characteristics. It also lays the foundation to provide additional characterization with minimal effort. The tool, Ask Pete, is freely available from <http://tkurtz.grc.nasa.gov/pete>.